

Applicant : Songxiang Wei
Appl. No. : 09/835,079
Examiner : Ismail, Shawisaif
Docket No. : 16440.4011

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A method for sharing an application, the method comprising:

determining a position and a size of a shared application window displayed in a presenter screen by monitoring function calls made by the shared application to a Graphics Device Interface;

determining a position and a size of a non-shared application window displayed in the presenter screen by monitoring function calls made by the non-shared application; if the non-shared application window overlaps the shared application window in a region of the presenter screen, determining a position and a size of the overlapping region;

capturing a screen shot of an image corresponding to the shared application window; and

transmitting the screen shot and information for the position and size of the overlapping region to generate a viewer screen.

2. (Original) The method of Claim 1 further comprising:

transmitting the position and the size of the shared application window to a viewer.

3-5. (Cancelled)

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6. (Previously presented) The method of Claim 1 further comprising:
determining whether the position or the size of the shared application window has changed by monitoring function calls made by the shared application; and
if the position or the size of the shared application window has changed, determining a new position or a new size of the shared application window.
7. (Original) The method of Claim 1 further comprising:
periodically capturing an image corresponding to the shared application window.
8. (Previously presented) The method of Claim 7 further comprising:
periodically transmitting the captured image to a viewer.
9. (Currently amended) A computer-readable storage medium storing a computer program comprising computer instructions for:
determining a position and a size of a shared application window displayed in a presenter screen by monitoring function calls made by the shared application to a Graphics Device Interface;
determining a position and a size of a non-shared application window displayed in the presenter screen by monitoring function calls made by the non-shared application;
if the non-shared application window overlaps the shared application window in a region of the presenter screen, determining a position and a size of ~~an~~ the overlapping region;
capturing a screen shot of an image corresponding to the shared application window; and
transmitting the screen shot and information for the position and size of the overlapping region to generate a viewer screen.

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10. (Previously presented) The computer readable storage medium of Claim 9, the computer program further comprising computer instructions for:

transmitting the position and the size of the shared application window to a viewer.

11-13. (Cancelled)

14. (Previously presented) The computer readable storage medium of Claim 9, the computer program further comprising computer instructions for:

determining whether the position or the size of the shared application window has changed by monitoring function calls made by the shared application; and
if the position or the size of the shared application window has changed,
determining a new position or a new size of the shared application window.

15. (Previously presented) The computer readable storage medium of Claim 9, the computer program further comprising computer instructions for:

periodically capturing the image corresponding to the shared application window.

16. (Previously presented) The computer readable storage medium of Claim 15, the computer program further comprising computer instructions for:

periodically transmitting the captured image to a viewer.

17. (Currently amended) A data conferencing system comprising:
a presenter computer connected to one or more server computers via a global area computer network and to a presenter display to display a presenter screen;

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a viewer computer connected to the one or more server computers via the global area computer network and to a viewer display to display a viewer screen; and
a computer program executable by the presenter computer, wherein the computer program comprises computer instructions for:

determining a position and a size of a shared application window displayed in the presenter screen by monitoring function calls made by the shared application to a Graphics Device Interface;

determining a position and a size of a non-shared application window displayed in the presenter screen by monitoring function calls made by the non-shared application;

if the non-shared application window overlaps the shared application window in a region of the presenter screen, determining a position and a size of ~~an~~ the overlapping region;

capturing a screen shot of an image ~~within~~ corresponding to the shared application window; and

transmitting the screen shot and information for the position and size of the overlapping region to the viewer computer to generate the viewer screen.

18. (Previously presented) The data conferencing system of Claim 17, the computer program further comprising computer instructions for:

transmitting the position and the size of the shared application window to the viewer computer.

19-21. (Cancelled)

22. (Previously presented) The data conferencing system of Claim 17, the computer

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program further comprising computer instructions for:

determining whether the position or the size of the shared application window has changed by monitoring function calls made by the shared application; and
if the position or the size of the shared application window has changed,
determining a new position or a new size of the shared application window.

23. (Previously presented) The data conferencing system of Claim 17, the computer program further comprising computer instructions for:

periodically capturing the image corresponding to the shared application window.

24. (Previously presented) The data conferencing system of Claim 23, the computer program further comprising computer instructions for:

periodically transmitting the captured image to the viewer computer.

25. (Currently amended) A computer-implemented method for sharing an application using screen sampling, the method comprising:

receiving from a presenter a selection of a shared application;
monitoring function calls made by the shared application to a Graphics Device Interface to dynamically determine a position and a size of a window displayed in a presenter screen for the shared application;

monitoring function calls made by a non-shared application to dynamically determine a position and a size of a window displayed in the presenter screen for the non-shared application;

comparing the position and the size of the window for the shared application against the position and the size of the window for the non-shared application to determine any overlapping regions in the presenter screen

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capturing a screen shot of an image corresponding to the window for the shared application; and

transmitting the screen shot of the image corresponding to the window for the shared application and information for the position and size of the overlapping regions to generate a viewer screen.

26. (Previously presented) The method of Claim 25 further comprising:
using the transmitted screen shot of the image corresponding to the window for the shared application and information for the overlapping regions to display the image to in the viewer screen with the overlapping regions filled in with a preset pattern.

27. (Previously presented) The method of Claim 25 further comprising:
compressing the screen shot of the image corresponding to the window for the shared application.

28. (Previously presented) The method of Claim 25 further comprising:
capturing a screen shot of an updated image corresponding to the window for the shared application; and
transmitting the screen shot of the updated image corresponding to the window for the shared application to update the a viewer screen.

29. (Previously presented) The method of Claim 25 further comprising:
periodically capturing the image corresponding to the shared application window.

30. (Previously presented) The method of Claim 25 further comprising:
determining whether the position or the size of either the window for the shared

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application or the window for the non-shared application has changed; and
transmitting information about the change in the position or the size to a update
the viewer screen.

31. (Currently amended) A computer-readable storage medium storing a computer program comprising computer instructions for;

- receiving from a presenter a selection of a shared application;
- monitoring function calls made by the shared application to a Graphics Device Interface to dynamically determine a position and a size of a window displayed in a presenter screen for the shared application;
- monitoring function calls made by a non-shared application to dynamically determine a position and a size of a window displayed in the presenter screen for the non-shared application;
- comparing the position and the size of the window for the shared application against the position and the size of the window for the non-shared application to determine any overlapping regions in the presenter screen
- capturing a screen shot of an image corresponding to the window for the shared application; and
- transmitting the screen shot of the image corresponding to the window for the shared application and information for the position and size of the overlapping regions to generate a viewer screen.

32. (Previously presented) The computer readable storage medium of Claim 31, wherein the computer program further comprises computer instructions for;

- using the transmitted screen shot of the image corresponding to the window for the shared application and information for the overlapping regions to display the image to

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in the viewer screen with the overlapping regions filled in with a preset pattern.

33. (Previously presented) The computer readable storage medium of Claim 31, the computer program further comprising computer instructions for:

compressing the screen shot of the image corresponding to the window for the shared application.

34. (Previously presented) The computer readable storage medium of Claim 31, the computer program further comprising computer instructions for:

capturing a screen shot of an updated image corresponding to the window for the shared application; and

transmitting the screen shot of the updated image corresponding to the window for the shared application to a update the viewer screen.

35. (Previously presented) The computer readable storage medium of Claim 31, the computer program further comprising computer instructions for:

periodically capturing the image corresponding to the shared application the window.

36. (Previously presented) The computer readable storage medium of Claim 31, the computer program further comprising computer instructions for:

determining whether the position or the size of either the window for the shared application or the window for the non-shared application has changed; and

transmitting information about the change in the position or the size to update the a viewer screen.

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37. (Currently amended) A data conferencing system comprising:

 a presenter computer connected to one or more server computers via a global area computer network and to a presenter display to display a presenter screen;

 a viewer computer connected to the one or more server computers via the global area computer network and to a viewer display to display a viewer screen; and

 a computer program comprising computer instructions for:

 receiving from a presenter a selection of a shared application;

 monitoring function calls made by the shared application to a Graphics Device Interface to dynamically determine a position and a size of a window displayed in the presenter screen for the shared application;

 monitoring function calls made by a non-shared application to dynamically determine a position and a size of a window displayed in the presenter screen for the non-shared application;

 application against the position and the size of the window for the non-shared application to determine any overlapping regions in the presenter screen;

 capturing a screen shot of an image corresponding to the window for the shared application; and

 transmitting the screen shot of the image corresponding to the window for the shared application and information for the position and size of the overlapping regions to generate the viewer ~~computer~~ screen.

38. (Currently Amended) A method for sharing an application, the method comprising:

 monitoring function calls made by a shared application to a Graphics Device Interface to determine a position and a size of a shared application window displayed in a presenter screen;

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monitoring function calls made by a non-shared application to determine a position and a size of a non-shared application window displayed in the presenter screen; if the non-shared application window overlaps the shared application window in a region of the presenter screen, determining a position and a size of the overlapping region; capturing a screen shot of an image corresponding to the shared application window; and using the screen shot and the position and size of the overlapping region to generate a viewer screen.

39. (Previously presented) The method of Claim 38, wherein generating the viewer screen includes filling the overlapping region with a predefined pattern.

40. (Currently amended) A data conferencing system comprising:
a presenter computer connected to one or more server computers via a computer network and to a presenter display to display a presenter screen;
a viewer computer connected to the one or more server computers via the computer network and to a viewer display to display a viewer screen; and
a computer program comprising instructions operable to cause data processing apparatus to perform operations comprising:
monitoring function calls made by a shared application to a Graphics Device Interface to determine a position and a size of a shared application window displayed in the presenter screen;
monitoring function calls made by the non-shared application to determine a position and a size of a non-shared application window displayed in the presenter screen;

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if the non-shared application window overlaps the shared application window in a region of the presenter screen, determining a position and a size of the overlapping region;
capturing a screen shot of an image corresponding to the shared application window; and
using the screen shot and the position and size of the overlapping region to generate the viewer screen.

41. (Previously presented) The system of Claim 40, wherein generating the viewer screen includes filling the overlapping region with a predefined pattern.

42. (New) The method of Claim 1, wherein the function calls by the shared application include a GetRandomRgn function.

43. (New) The method of Claim 42, wherein the GetRandomRgn function comprises a iNum value of 4.

44. (New) A method for sharing an application, the method comprising:
determining a position and a size of an OpenGL region of a shared application window displayed in a presenter screen by monitoring OpenGL function calls made by the shared application;
determining a position and a size of a non-OpenGL region of the shared application window displayed in a presenter screen by monitoring function calls made by the shared application;
determining a position and a size of a non-shared application window displayed

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in the presenter screen by monitoring function calls made by the non-shared application;
if the non-shared application window overlaps the OpenGL region or the non-OpenGL region of the shared application window in a region of the presenter screen, determining a position and a size of the overlapping region;
capturing a screen shot of an image corresponding to the shared application window; and
transmitting the screen shot and information for the position and size of the overlapping region to generate a viewer screen.

45. (New) A method for sharing an application, the method comprising:
determining a position and a size of a DirectDraw region of a shared application window displayed in a presenter screen by monitoring a DirectDraw COM interface;
determining a position and a size of a non-DirectDraw region of the shared application window displayed in a presenter screen by monitoring function calls made by the shared application;
determining a position and a size of a non-shared application window displayed in the presenter screen by monitoring function calls made by the non-shared application;
if the non-shared application window overlaps the DirectDraw region or the non-DirectDraw region of the shared application window in a region of the presenter screen, determining a position and a size of the overlapping region;
capturing a screen shot of an image corresponding to the shared application window; and
transmitting the screen shot and information for the position and size of the overlapping region to generate a viewer screen.